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## Gonorrhea Among Men Who Have Sex with Men — Selected Sexually Transmitted Diseases Clinics, 1993–1996

Among men who have sex with men (MSM), gonorrhea trends may reflect changes in sexual behaviors that also influence risk for human immunodeficiency virus (HIV) infection (*1*). Data from the Gonococcal Isolate Surveillance Project (GISP) were used to assess trends in gonococcal infection (GC) among MSM. For the subset of GISP sites where a substantial proportion of GC cases were in MSM, a special survey of the local areas was conducted to describe factors associated with GC in MSM. This report summarizes the results of that survey, which indicate that the number and proportion of MSM diagnosed with GC has increased in the sexually transmitted diseases (STD) clinics of several large cities in the United States.

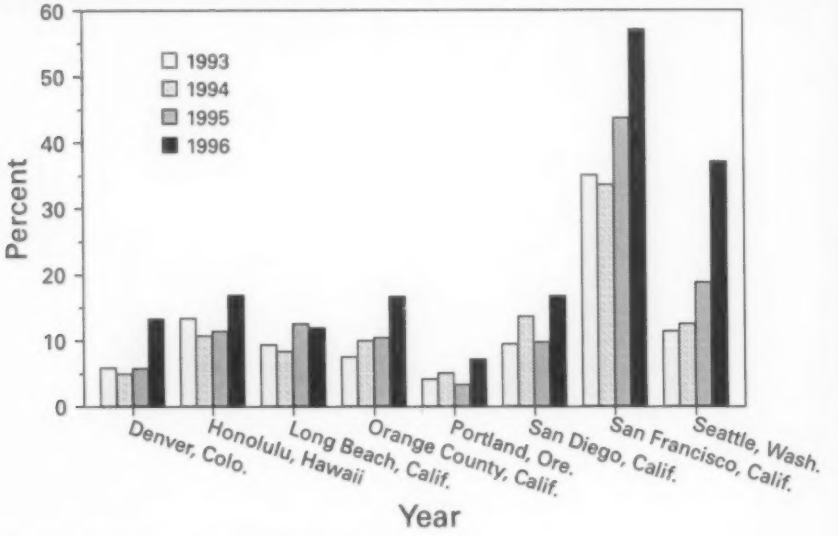
GISP is a sentinel surveillance project begun in 1987 to monitor antimicrobial resistance in *Neisseria gonorrhoeae*. Through GISP, STD clinics in 26 U.S. cities collect gonococcal isolates and clinical information, including sexual orientation, from the first 20 male patients with urethral GC examined each month. The sexual orientation of GISP participants examined from 1993 through 1996 was analyzed, and surveys were conducted of the clinics where >5% of GISP isolates over the 4-year period were from MSM (n=8)*. The survey collected information from locally available data about absolute numbers of GC cases in MSM, in contrast to the proportions that were available from GISP data. The survey also addressed overall gonorrhea and other STD (i.e., nongonococcal urethritis [NGU]) trends and factors that could be associated with GC trends in MSM (i.e., changes in clinic practices, geographic clustering of cases, sexual risk behaviors, illicit drug use, and HIV serostatus).

MSM comprised 5.0% of all cases in the GISP sample in 1993, a proportion similar to preceding years, and 8.7% in 1996 ($p<0.001$). Among the subset of eight GISP clinics where >5% of isolates were obtained from MSM, the proportion increased from 12.0% (range: 4.2%–35.1%) in 1993 to 23.5% (range: 7.2%–57.1%) in 1996 ($p<0.001$) (Figure 1). The median age of MSM reported from all 26 clinics was 30 years and remained stable from 1993 through 1996. Changes in the race/ethnicity distribution were not statistically significant: from 1993 to 1996, the percentage of MSM who were

*Clinics were located in Denver; Honolulu; Long Beach, Orange County, San Diego, and San Francisco, California; Portland, Oregon; and Seattle, Washington.

*Gonorrhea — Continued*

**FIGURE 1. Percentage of *Neisseria gonorrhoeae* isolates obtained from men who have sex with men — sexually transmitted diseases clinics in eight cities, 1993–1996**




Source: Gonococcal Isolate Surveillance Project

white increased from 58.6% to 64.9%, and the percentage who were black decreased from 23.0% to 17.4%.

Clinics in San Francisco; Seattle; and Portland, Oregon, experienced increases in both the absolute number and proportion of gonorrhea cases among MSM. From 1994 to 1996, GC among MSM at the Seattle clinic increased 125% (from 51 cases to 115 cases), while clinic visits by MSM increased by 17%. During the same period, the proportion of positive rectal and pharyngeal GC cultures among MSM at the Seattle clinic increased from 5.0% to 8.0% and from 1.5% to 6.7%, respectively. From 1994 to 1995 at the San Francisco clinic, the absolute number of MSM with GC increased 24% (from 271 to 336); similar increases occurred in the number of GC cases identified from a neighborhood known to have a high concentration of MSM and in the number of rectal GC cases. From 1995 to 1996 at the Portland clinic, the number of MSM with GC increased 124% (from 33 cases to 74 cases). Clinic visits by MSM during the same period increased, but the number of MSM seen by the clinic decreased, indicating that the increase in GC cases did not result from an increase in the number of MSM served by the clinic.

Enhanced GC screening efforts targeted to MSM were initiated in San Francisco in early 1996, potentially contributing to an increase in reported cases in 1996; however, the absolute number of cases of GC in 1996 were not available at the time of this report. Changes in screening or outreach to MSM were not identified at other clinics in this survey. In addition, none of the clinics surveyed were aware of any changes in

*Gonorrhea — Continued*

the availability of clinical services that might have prompted MSM to shift STD care-seeking from other venues to public STD clinics.

From 1994 to 1996, NGU increased 27% among MSM at the Seattle clinic and 40% among MSM at the San Francisco clinic from 1993 to 1995. Approximately one fourth of MSM with GC identified at the Seattle and Portland clinics and one fourth of all MSM examined at the San Francisco clinic were HIV positive.

Of the remaining five clinics surveyed, those in Honolulu and San Diego reported substantial increases in the number of MSM with GC. In San Diego, from 1996 to the first quarter of 1997, the proportion of rectal specimens that were positive for *N. gonorrhoeae* increased from 3.9% (seven of 180) to 14.6% (six of 41), and the proportion of male pharyngeal cultures that were positive increased from 2.9% (15 of 522) to 4.0% (five of 125). Based on five interviews of MSM with GC, four also were HIV infected. At the Denver clinic, the absolute number of MSM with GC decreased despite an increase in the proportion of GC cases identified in MSM from 1995 to 1996. In comparison with other clinics surveyed, the Denver clinic observed an increase in the number of black MSM examined from 1995 to 1996. The Long Beach and Orange County, California, clinics are investigating local trends in GC among MSM.

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**Editorial Note:** The incidence of gonorrhea among MSM declined substantially in the United States during the early 1980s (*2*) as the HIV epidemic led to substantial reductions in sexual risk behaviors (*3*). However, findings in both the United States and Europe indicate a possible reversal in GC trends among MSM (*4,5*). Several studies have documented relapses in high-risk behavior among MSM, including unprotected anogenital intercourse (*1,6*). A recent multicity survey of MSM aged 15–22 years indicated that HIV was highly prevalent (5%–10%) in this population, coincident with a high rate of unprotected anal sex (*7*).

The findings in this report indicate that, despite a continuing decline in overall rates of GC in the United States (*8*), the incidence of GC in MSM may be increasing in several U.S. cities. This increase cannot be explained by such factors as improved case ascertainment or increased screening in this population. This report also documented increases in rectal GC in several clinics, an indicator of unprotected anal intercourse. Although complete data were unavailable, preliminary observations from Portland, San Francisco, and Seattle linked GC cases in MSM with attendance at certain local clubs and other places frequented by MSM. Observations from Seattle further implicated sexual activities with anonymous partners and the use of illicit drugs and alcohol in the increase in GC cases among MSM.

An increase in high-risk encounters among MSM could explain the increase in GC cases and could enhance HIV transmission in this population. Among clinics with information about HIV status, approximately one fourth of MSM with GC also were HIV infected. The presence of urethritis in persons with HIV increases the quantity of HIV in their semen (*9*) and presumably the likelihood of HIV transmission, while the pres-

*Gonorrhea — Continued*

ence of urethritis in persons without HIV has been associated with an increased likelihood of HIV acquisition (*10*).

Because information about sexual orientation and behaviors is not part of routine GC case reporting, data about GC trends among MSM must be obtained through special surveillance efforts. This report demonstrates how a sentinel surveillance system designed for tracking antimicrobial resistance can be useful for following epidemiologic trends. However, proportional changes noted in GISP data may require further investigation using local data.

STD clinics and other facilities that serve substantial numbers of MSM are encouraged to collect and analyze local data to follow trends in STDs and sexual behaviors that may increase the risk for acquisition or transmission of HIV infection among MSM. The increase in GC among MSM underscores the need for innovative approaches to achieving and maintaining safer-sex practices among MSM. In addition, the relation between GC and the spread of HIV (*9,10*) necessitates specific attention to GC control, including routine screening for GC among MSM served by both public and private providers, prompt treatment of infection, and appropriate partner management. Public health agencies and other organizations serving MSM must recognize the importance of GC as a public health problem that is linked, through behavior and biology, to spread of HIV.

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## Progress Toward Global Measles Control and Elimination, 1990–1996

In 1989, the World Health Assembly resolved to reduce measles morbidity by 90% and measles mortality by 95% by 1995, compared with disease burden during the prevaccine era (*1*). By 1996, the estimated incidence and death rates for measles worldwide were reduced by 78% and 88%, respectively (*2*). In 1990, the World Summit for Children adopted a goal of vaccinating 90% of children against measles by 2000. However, routine measles vaccination coverage has remained relatively stable since 1990, and an estimated 1 million children continue to die from this preventable disease each year. During the 1990s, the widespread use of innovative measles-control strategies in the Region of the Americas and countries such as Mongolia, South Africa, and the United Kingdom demonstrated that high-level measles control and even interruption of transmission is feasible over large geographic areas. This report updates the status of measles control and elimination worldwide and includes disease surveillance and vaccination coverage data received by the World Health Organization (WHO) headquarters in Geneva, Switzerland, as of August 29, 1997. These findings indicate that, in some regions, substantial progress has been made to control and interrupt measles transmission; in others, measles continues to cause high morbidity and mortality because of failure to implement measles-control strategies.

### STAGES OF MEASLES CONTROL

Based on implementation of a combination of vaccination and surveillance strategies, countries are considered to be in one of three stages: control*, outbreak prevention, or elimination†.

#### Measles Control

In the control stage, the objective is to achieve high routine coverage with one dose of measles vaccine among infants to reduce measles morbidity and mortality. To accelerate measles control in large urban and other high-risk areas with a substantial proportion of a country's unvaccinated children and measles deaths, mass vaccination campaigns targeting children aged 9 months to 3–5 years have been recommended (*3*).

#### Measles Outbreak Prevention

Since the mid-1990s, an increasing number of countries where measles incidence has been persistently reduced have adopted aggressive vaccination strategies to prevent forecasted measles outbreaks or interrupt transmission completely. Administration of supplemental doses of measles vaccine through mass vaccination campaigns has resulted in high levels of population immunity and has interrupted transmission. In some countries, after the initial mass campaign, an additional dose of measles vaccine is recommended at school entry.

#### Measles Elimination

In the Region of the Americas, the Pan American Sanitary Conference resolved in 1994 to eliminate measles from the Western Hemisphere by 2000 (*4*) using the following strategies: 1) conducting a one-time "catch-up" vaccination campaign targeting all

*Reduction of disease incidence and/or prevalence to an acceptable level as a result of deliberate efforts, requiring continued control measures.
†Reduction of the incidence of a disease to zero as a result of deliberate efforts, requiring continued control measures.

*Global Measles Control and Elimination — Continued*

children aged 9 months–14 years; 2) achieving and maintaining high routine measles vaccination coverage among children aged 12–23 months; 3) conducting periodic "follow-up" campaigns targeting all children aged 1–4 years; and 4) conducting enhanced surveillance with laboratory investigation of suspected cases (*4*). Other regions and countries have implemented or are considering implementation of strategies aimed at interrupting measles virus transmission.

## PROGRESS TOWARD IMPLEMENTING STRATEGIES

### Routine Vaccination Coverage

From 1977 (when the Expanded Program on Immunization began monitoring coverage) to 1990, global reported coverage with one dose of measles vaccine administered through routine services increased from approximately 5% in 1977 to 16% in 1983 and to 76% in 1990. Since 1990, routine measles vaccination coverage has remained relatively stable (Table 1), with reported coverage at 81% in 1996 (Figure 1). Comparing 1990 and 1996 data, reported routine vaccination coverage increased 3%–11% in the six WHO regions. In 1996, a total of 73 countries achieved coverage of >90%. Nineteen countries reported coverage of <50%; of these, 16 were in Africa. To achieve global coverage of 90%, at least 14.3 million additional children need to be vaccinated each year, nearly 60% of whom reside in seven countries (Brazil, China, Ethiopia, India, Kenya, Nigeria, and Pakistan).

### Urban Vaccination Campaigns

During 1993–1996, several countries in Asia (Bangladesh, India, Myanmar, Nepal, and the Philippines) conducted urban vaccination campaigns targeting high-risk areas to reduce measles morbidity and mortality. However, surveillance data are insufficient to accurately assess the impact of these campaigns.

### Outbreak Prevention or Elimination Campaigns

During 1990–1996, a total of 49 countries conducted a catch-up vaccination campaign to interrupt measles transmission, administering measles vaccine to approximately 166 million children aged <18 years (93% of the population targeted). Approximately 142 million of these doses were administered in the Americas. In addition, 29 countries in the Americas conducted at least one follow-up campaign.

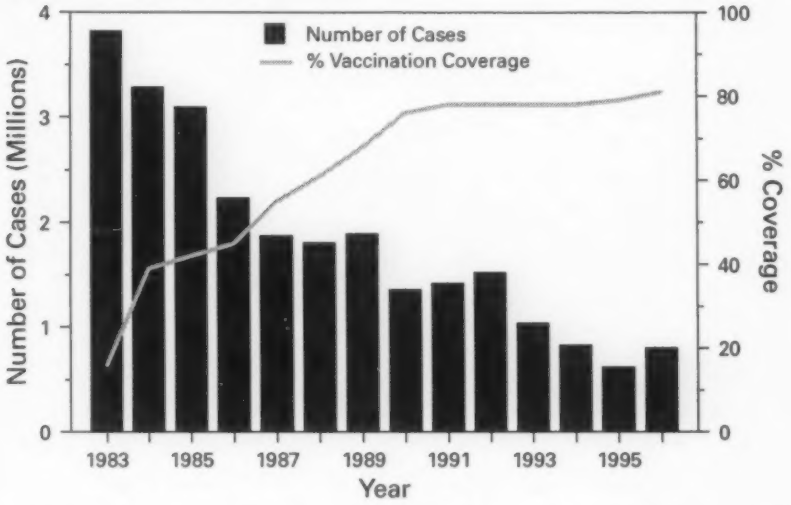
**TABLE 1. Reported number of measles cases and reported measles vaccination coverage, by World Health Organization (WHO) region, 1990 and 1996***

| Region | No. cases | | | Vaccination coverage | | |
|---|---|---|---|---|---|---|
| | 1990 | 1996 | % Change from 1990 to 1996 | 1990 | 1996 | % Point change from 1990 to 1996 |
| African | 481,294 | 445,949 | – 7% | 53 | 56 | 3% |
| American | 246,607 | 2,109 | –99% | 77 | 85 | 8% |
| Eastern Mediterranean | 59,502 | 20,361 | –66% | 76 | 85 | 9% |
| European | 188,306 | 162,967 | –13% | 80 | 86 | 6% |
| Southeast Asian | 225,144 | 81,477 | –64% | 71 | 82 | 11% |
| Western Pacific | 156,139 | 84,459 | –46% | 93 | 96 | 3% |
| **Total** | **1,356,992** | **797,322** | **–41%** | **76** | **81** | **5%** |

*As reported to the WHO headquarters in Geneva, Switzerland, by August 29, 1997.

*Global Measles Control and Elimination — Continued*

**FIGURE 1. Reported number of measles cases and reported measles vaccination coverage — worldwide, 1983–1996***




*As reported to the World Health Organization headquarters in Geneva, Switzerland, by August 29, 1997.

**Measles Surveillance**

Establishment of measles surveillance remains a major challenge in both industrialized and developing countries. For example, measles is not a notifiable disease in Austria, France, Germany, and Japan. Even in countries where measles is notifiable, there is substantial underreporting of cases, and information about age and vaccination status of cases often is not collected.

In the Region of the Americas, measles surveillance has been strengthened substantially since 1990. A total of 43 (91%) countries have reported weekly to the regional office, and standardized case-based reporting of measles cases, including laboratory confirmation, has been established.

The reliability of clinical diagnosis of measles declines as the incidence of the disease decreases to very low levels. The current laboratory-confirmation strategy is based on a measles-specific immunoglobulin M (IgM) enzyme immunoassay (EIA) at national laboratories with confirmatory testing by IgM capture EIA at reference laboratories. In addition, a measles virus reference data bank is being established (*5*). Eight genotypes of measles virus have been identified worldwide. Additional measles isolates are needed to compile a global genotype map to facilitate tracking of virus transmission worldwide.

*Global Measles Control and Elimination — Continued*

## IMPACT OF STRATEGY IMPLEMENTATION ON MEASLES INCIDENCE

During 1980–1996, the number of reported measles cases worldwide declined from 4.4 million in 1980 to 1.3 million in 1990 and to approximately 0.8 million in 1996. However, measles reporting is incomplete; the actual burden from measles in 1996 is an estimated 36.5 million cases and 1 million deaths (*6*). A total of 40 countries (representing 1% of the global population) reported zero measles cases in 1996, compared with 12 countries in 1990. These 40 countries primarily are small island nations in the Region of the Americas (23), the Western Pacific Region (nine), and the African Region (four).

In 1996, most (445,949 [62%]) of the measles cases worldwide were reported from the African Region (Table 1). Of the six WHO regions, disease burden in 1996 was lowest in the Americas (2109 cases); 488 (23%) cases were reported from the United States. This represented a 99% decline in number of cases in the region compared with 1990 and the lowest number ever reported by this region.

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**Editorial Note:** Despite the widespread availability of safe and effective measles vaccines since 1963, measles still accounts for 10% of global mortality from all causes among children aged <5 years (*6*); it is the eighth leading cause of death worldwide, representing 2.7% of disability-adjusted life-years in 1990 (*6*). Failure to deliver at least one dose of measles vaccine to all infants continues to be the primary reason for this preventable morbidity and mortality.

As a result of ongoing progress toward global poliomyelitis eradication[§], increasing attention has been focused on improving measles control worldwide. In the Region of the Americas, the combination of conducting catch-up and follow-up vaccination campaigns and increasing routine vaccination coverage has demonstrated that measles transmission can be interrupted over large geographic areas (*4*). Although measles eradication is technically feasible (*7*), several programmatic, political, and financial obstacles must be overcome before such an eradication goal could be achieved. Polio eradication has stimulated acceleration of measles control worldwide and, in the European Region and the Eastern Mediterranean Region of WHO, has resulted in efforts to establish regional measles-elimination goals. Evaluation of elimination strategies in these regions and countries will provide valuable information for developing a global measles-eradication strategy.

Three immediate measures are necessary to attain disease-reduction and coverage goals and to decrease the number of deaths attributable to measles. First, countries should increase coverage with at least one dose of measles vaccine among infants, especially in countries in Sub-Saharan Africa, where a substantial number of measles deaths continue to occur each year. Second, more aggressive measles vaccination efforts are needed, including the use of mass campaigns in large urban and other high-risk areas (*8*). However, experience from countries such as Philippines (*9*) indicates that unvaccinated children frequently are missed by these campaigns unless

[§]Permanent reduction of the worldwide incidence of a disease to zero as a result of deliberate efforts, obviating the need for further control measures.

*Global Measles Control and Elimination — Continued*

special efforts are made to accurately identify the areas unreached by routine vaccination services. This experience emphasizes the need to develop the infrastructure necessary to provide routine vaccination services to these hard-to-reach communities. Third, surveillance must be strengthened as a critical component of accelerated measles control. Improved surveillance is necessary to evaluate the impact of strategies and to monitor the prevalence of susceptible persons in a population. When countries progress from measles-control to measles-elimination activities, surveillance must be sufficiently sensitive to rapidly detect importations of virus. As measles control accelerates and measles-elimination efforts are implemented, the diagnosis of measles will increasingly rely on laboratory confirmation. The establishment of a global measles laboratory network is essential for countries in the outbreak-prevention or measles-elimination stage.

Activities are ongoing to better estimate the global disease burden of measles, the cost and effectiveness of different control and elimination strategies, the interaction between measles elimination and polio eradication, and the benefits of measles eradication for development of health systems. However, these activities should not delay more immediate efforts to reduce the substantial disease burden caused by measles.

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## Chronic Interstitial Lung Disease in Nylon Flocking Industry Workers — Rhode Island, 1992–1996

Interstitial lung disease (ILD) occurs infrequently; some cases are attributed to sarcoidosis, pulmonary hemorrhage syndromes, connective tissue diseases, hypersensitivity pneumonitis, drugs, radiation, and mineral dusts (e.g., silica or asbestos). However, most cases of ILD are of uncertain classification or etiology (*1*). This report describes preliminary findings of the investigation in Rhode Island of an outbreak of ILD among workers involved in the manufacture of finely cut nylon (flock) and flocked

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fabric (used for upholstery, clothing, and automobiles); the findings provide evidence of a newly recognized occupational illness.

**Description of Index Cases**

In November 1994, a 35-year-old textile worker was referred to a university-based occupational health clinic for evaluation of chronic ILD. No workplace exposures were initially identified as causing his illness, and during the following 12 months, he recovered almost completely while remaining out of work and receiving systemic corticosteroids. In January 1996, a 28-year-old man was referred to the clinic for evaluation of biopsy-confirmed ILD, characterized by bronchiolocentric nodular and diffuse interstitial lymphoid infiltrates and mild interstitial fibrosis that met histologic criteria for nonspecific interstitial pneumonia (NSIP) (*2*). Both men worked at the same nylon flocking plant in Rhode Island; further inquiry revealed that at the company's plant in Canada, five cases of ILD had been diagnosed during 1990–1991 (*3*), and two cases had been diagnosed in 1995. In March 1996, at the request of the company and with the cooperation of the workers' union, investigations were undertaken by the Brown University Program in Occupational Medicine and CDC's National Institute for Occupational Safety and Health (NIOSH).

**Medical/Epidemiologic Investigation**

To identify additional ILD cases among current production workers (n=127) at the Rhode Island plant, all employees with persistent respiratory symptoms were encouraged to undergo full pulmonary function testing, chest radiography, and high resolution computerized chest tomography (HRCT). Those with unexplained restrictive lung function, impaired diffusing capacity, or HRCT findings consistent with ILD were referred for transbronchial or wedge biopsy. A single pulmonary pathologist reviewed all specimens as well as those of the five case-patients in Canada who had biopsies. A case of "flock-worker's lung" was defined as 1) a histologic diagnosis of NSIP (*2*) characterized by bronchiolocentric nodular and diffuse interstitial lymphoid infiltrates and nonuniform alveolar filling by macrophages, with or without interstitial fibrosis; 2) other histologic manifestations of ILD not attributable to another disease; or 3) in the absence of a tissue specimen, a grossly abnormal distribution of cell types on bronchoalveolar lavage (BAL) with restrictive lung function and HRCT findings of either diffuse ground glass opacity or micronodularity.

The study cohort included all current and former production workers employed at the Rhode Island facility on or after June 15, 1990, and who had worked for ≥18 months before September 15, 1996 (n=165).* After working 18 months, cohort members contributed person-years at risk for time subsequently worked from June 15, 1990, through September 15, 1996. General population estimates for age- and sex-specific incidence of pulmonary fibrosis/idiopathic pulmonary fibrosis (PF/IPF) and for sex-specific incidence of all ILD were obtained from an ILD registry for Bernalillo County, New Mexico (*1*)†; using these estimates and weights based on the demo-

*The company's recordkeeping system precluded formation of a larger cohort and necessitated the 18-month employment requirement.

†These data from Bernalillo County represent the only available estimates of background incidence of ILD cases. For the category of "all ILD," only sex-specific rates are available.

*Interstitial Lung Disease — Continued*

graphics of the study cohort, standardized incidence ratios for PF/IPF[§] and for all ILD were calculated. Ninety-five percent confidence intervals (CIs) for these estimates were derived by exact Poisson calculations.

Among the 165 members of the cohort, seven (4%) were identified with "flock-worker's lung." The mean age for these seven was 41 years (range: 28–57 years); six were men. Two were current smokers, four had discontinued smoking ≥18 months before diagnosis, and one had never smoked. ILD had been diagnosed in these persons in 1992 (one), October 1994 (one), December 1995 (one), and April–September 1996 (four). The median latencies from time of hire to onset of symptoms (gradually progressive dry cough and dyspnea) and from onset of symptoms to time of diagnosis were 6 years (range: 9 months–31 years) and 1 year (range: 4 months–4 years), respectively. Two workers reported worsening symptoms while at work, but no job category or department was associated with illness. Serologic test results (rheumatoid factor, antinuclear antibody, and hypersensitivity pneumonitis precipitins) were normal except for nondiagnostic findings in two workers. Case-patients experienced symptomatic, radiographic, and functional improvement within weeks to months of leaving work; two received corticosteroids, one remained dependent on supplemental oxygen for an additional 3 years, and none have recovered completely.

Tissue obtained from transbronchial (n=2) and wedge (n=4) biopsies demonstrated NSIP in five patients and bronchiolitis obliterans organizing pneumonia (BOOP) in the sixth. All six had nodular lymphoid infiltrates; four had germinal centers. The seventh case was diagnosed based on a BAL finding of 40% eosinophils, moderate restrictive lung function, and grossly abnormal HRCT. All of the biopsies from the five case-patients in Canada revealed NSIP; two also showed dominant areas of diffuse alveolar damage, and three revealed lymphoid nodules with germinal centers. No granulomas (suggesting hypersensitivity pneumonitis) or birefringent particles (suggesting certain pneumoconioses) were observed in any of the histologic specimens.

At the Rhode Island plant, the crude incidences of "flock-worker's lung" and of all ILD (including two cases of talcosis and one case of pulmonary histiocytosis X) were 10.5 cases per 1000 person-years and 15 cases per 1000 person-years, respectively. The standardized incidence ratios for PF/IPF and for all ILD were 258 (95% CI=104–530) and 48 (95% CI=23–88), respectively.

**Environmental Investigation**

In flock manufacture, nylon thread previously impregnated with a titanium dioxide delusterant is dyed, coated (with a finish consisting of tannic acid, an ammonium ether of potato starch, and fatty alcohol derivatives), cut, dried, and bagged. Flocked fabric is made by using the flock's electrostatic charge to place the flock on acrylic adhesive-covered cotton-polyester fabric, which is then heat-cured. Exposures generic to the industry include bioaerosols, nylon fiber ≥12 μ in diameter, a finishing agent, acrylic adhesive, nonfibrous zeolite, heat transfer oil, and thermal degradation products. Preliminary air sampling at the Rhode Island plant, collected volumetrically, revealed extremely high short-term total dust concentrations (up to 83 mg/m$^3$), only modest concentrations of fungal spores and endotoxin, low levels of volatile organic

[§]Background rates of PF/IPF were used to derive the standardized incidence ratio because cases of "flock-worker's lung" probably would have been relegated to this broader ILD subcategory had the apparently specific clinicopathologic picture and occupational association been overlooked.

*Interstitial Lung Disease — Continued*

compounds, and negligible concentrations of metals. Respirable dust, characterized by both phase contrast microscopy and scanning electron microscopy with energy dispersive x-ray analysis, consisted of particles with physical structure and chemical composition similar to those of bulk samples of the finish components; a substantial number of respirable-size fragments of nylon also were present.

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**Editorial Note:** The findings in this report document an excessive incidence at two North American nylon flock production/flocking plants of a chronic diffuse ILD. The clinical and pathologic features of "flock-worker's lung" lack characteristics typically associated with previously recognized forms of occupational ILD (including hypersensitivity pneumonitis; pneumoconioses like silicosis or asbestosis; and those cases of BOOP that have followed acute massive exposure to a toxic gas, fume, or vapor) and indicate the occurrence of a previously unrecognized occupational illness.

The cause of the illness described in this report remains unknown. Although investigators of the ILD outbreak in Canada postulated an etiologic role for mycotoxins (*3*), no mycotoxins were detected at that plant, and two new cases of ILD occurred there after interventions were introduced to minimize mold growth; in addition, mycotoxin exposure has not been shown to cause chronic diffuse ILD. The findings in this report indicate a potential role for nylon flock and its finish in causing illness. Although intact nylon flock fibers are not considered respirable (i.e., they are too large to reach the respiratory bronchioles and gas-exchange units of the lung), preliminary evidence suggests that respirable-size nylon fragments are generated in this industry. This finding may have important implications because nylon is a polyamide, as are the agents recently implicated (*4*) in outbreaks of fatal BOOP among textile-dye sprayers in Spain and Algeria (*5,6*); furthermore, the biopsy specimens from one case-patient in Rhode Island revealed BOOP, and the index case-patient who did not have a biopsy had clinical findings that strongly suggested BOOP. Although the limited toxicologic data available for nylon and the three-component finish suggest the possibility that these substances may have adverse pulmonary effects (*7–9*), their role, if any, in causing "flock-worker's lung" has not been determined.

The two clusters described in this report together constitute the largest unexplained continuing outbreak of nongranulomatous chronic diffuse ILD in adults under investigation by CDC. Aspects of the illnesses of particular concern are the frequently subtle clinical, pulmonary function, and radiographic abnormalities; the potential for rapid clinical progression; and the apparent lack of complete reversibility. Until the specific cause of the outbreak is identified and eliminated, employers should ensure that work practices, engineering controls, and respirators are used to reduce respiratory exposures within the industry. Medical screening and surveillance should be intensified, and removal from exposure through alternative work or other accommodation should be offered to affected employees. CDC has initiated a series of toxicologic studies and is considering additional epidemiologic investigation within the flocking industry. Information concerning additional cases of ILD among workers employed in this industry can be reported to CDC's Epidemiological Investigations Branch, Division of Respiratory Disease Studies, NIOSH, telephone (304) 285-5751.

*Interstitial Lung Disease — Continued*

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## *Notice to Readers*

### National Fire Prevention Week — October 5–11, 1997

October 5–11 is National Fire Prevention Week. In the United States, a national health objective for 2000 is to reduce residential fire-related deaths to no more than 1.2 per 100,000 persons (objective 9.6) (*1*). In 1995, the United States had the highest death rate from fires of all developed countries (1.7 per 100,000 persons). During 1995 (the most recent year for which data are available), residential fires accounted for 3640 deaths and 18,650 injuries (*2*; CDC, unpublished data, 1995). Persons at highest risk were less likely to reside in homes equipped with functional smoke detector units (e.g., residents of manufactured homes and rental properties, low income and elderly persons, and children aged <5 years).

Most residential fires are caused by cooking or heating equipment, spontaneous combustion, or conditions suggesting arson. However, residential fires in which a death occurs are often caused by smoking, heating equipment, or conditions suggesting arson. Rates for fire-related death are highest in southern states, where use of wood-burning stoves and portable space heaters is widespread. In addition, these devices often are improperly placed and/or left unattended.

Although equipping homes with smoke detectors and adhering to basic fire-safety practices are the best deterrents to residential fires, many persons do not take these precautions. In 1995, an estimated 93% of U.S. homes were equipped with a smoke detector, but only 74% of homes had a smoke detector unit that was functional (*3,4*). The annual number of residential fire-related deaths could be reduced if all homes were equipped with sufficient functional smoke detector units.

*Notice to Readers — Continued*

Deaths and injuries from residential fires can be prevented by 1) installing a smoke detector on each habitable floor and one outside each bedroom; 2) replacing batteries in smoke detectors at least once a year; 3) designing and practicing a fire escape plan to ensure that exit from the home is quick and safe; 4) limiting use of heating devices (e.g., space heaters and wood-burning stoves) and, if using a heating device, carefully following manufacturer's operating guidelines; 5) keeping matches and lighters out of children's reach; and 6) not smoking.

Additional information about residential fire prevention is available from CDC's Division of Unintentional Injury Prevention, National Center for Injury Prevention and Control, telephone (770) 488-4652.

*References*

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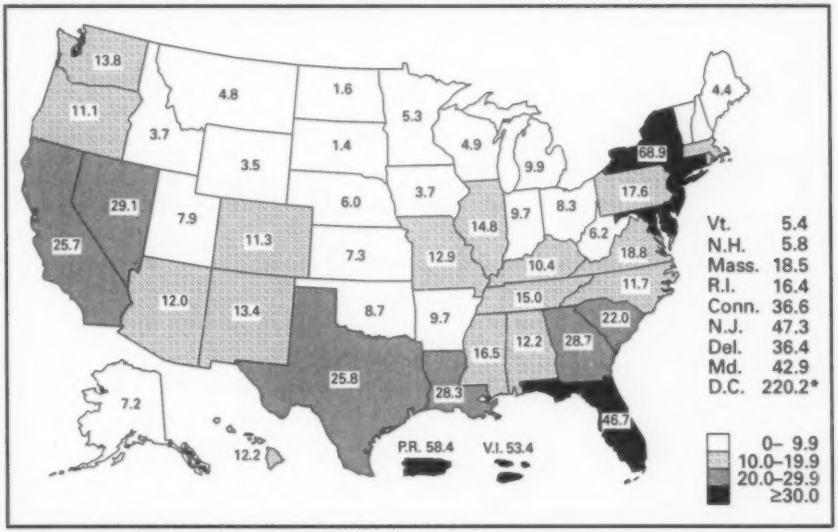
## AIDS Rates

The following map provides the annual rates of acquired immunodeficiency syndrome (AIDS) per 100,000 population, by state of residence from July 1996 through June 1997. The accompanying table lists the metropolitan areas with the 50 highest annual rates of AIDS per 100,000 population.

More detailed information about AIDS cases is provided in the *HIV/AIDS Surveillance Report*, single copies of which are available from the CDC National AIDS Clearinghouse, P.O. Box 6003, Rockville, MD 20849-6003; telephone (800) 458-5231 or (301) 217-0023. Internet users can view an electronic copy of the report by accessing CDC's World-Wide Web home page (http://www.cdc.gov), then selecting "Publications, Software, & Products."

Rates presented here represent cases reported to CDC over the indicated 12-month period. Reported cases over a recent time period indicate the size and characteristics of the populations affected by the epidemic and the distribution and impact of AIDS nationally. These data are not appropriate for analyzing trends in the epidemic over time. Additional information about trends in the epidemic were published in *MMWR* 1997;46:861–7.

**AIDS annual rates per 100,000 population — United States, July 1996–June 1997**




*This rate represents only persons residing within the geographic boundaries of the District and differs from the rate for the larger Washington, D.C., metropolitan area (see table).

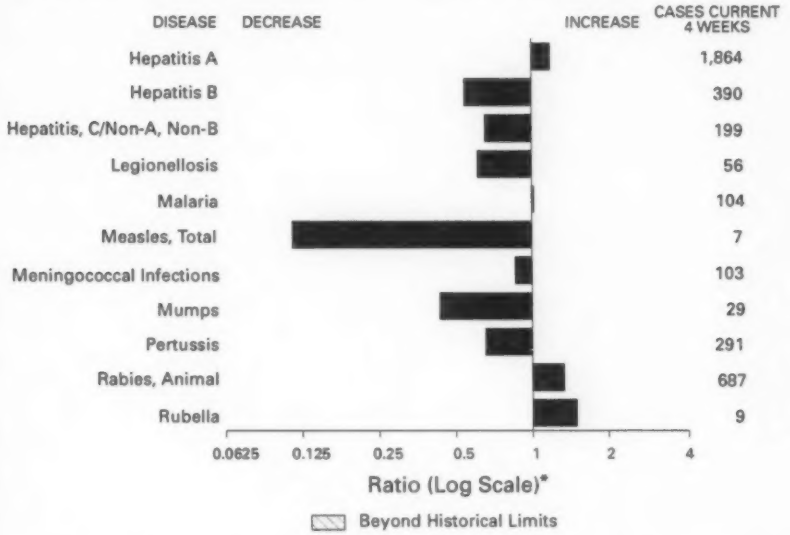
*AIDS Rates — Continued*

**Metropolitan areas* with the 50 highest AIDS annual rates per 100,000 population — United States, July 1996–June 1997**

| Metropolitan area of residence | Rate | Metropolitan area of residence | Rate |
|---|---|---|---|
| New York, N.Y. | 117.2 | Tampa-Saint Petersburg, Fla. | 29.8 |
| Jersey City, N.J. | 109.8 | Dallas, Tex. | 29.7 |
| Miami, Fla. | 86.6 | Rochester, N.Y. | 27.8 |
| San Francisco, Calif. | 83.1 | Memphis, Tenn. | 26.9 |
| Newark, N.J. | 80.0 | Austin, Tex. | 26.5 |
| Fort Lauderdale, Fla. | 78.4 | Springfield, Mass. | 26.5 |
| West Palm Beach, Fla. | 73.0 | Richmond, Va. | 26.3 |
| San Juan, P.R. | 70.2 | Louisville, Ky. | 25.0 |
| Baltimore, Md. | 61.8 | Nassau-Suffolk, N.Y. | 25.0 |
| New Orleans, La. | 48.7 | Oakland, Calif. | 24.8 |
| Baton Rouge, La. | 48.1 | San Antonio, Tex. | 24.8 |
| Houston, Tex. | 47.6 | Syracuse, N.Y. | 24.4 |
| Washington, D.C. | 44.2 | Nashville, Tenn. | 24.3 |
| New Haven, Conn. | 41.1 | Middlesex, N.J. | 23.9 |
| Atlanta, Ga. | 40.0 | Monmouth-Ocean, N.J. | 22.2 |
| Bergen-Passaic, N.J. | 39.7 | Seattle, Wash. | 22.2 |
| Wilmington, Del. | 39.2 | Albany-Schenectady, N.Y. | 22.0 |
| Hartford, Conn. | 37.1 | Sarasota, Fla. | 20.4 |
| Jacksonville, Fla. | 36.4 | Fort Worth, Tex. | 20.3 |
| Los Angeles, Calif. | 35.4 | Albuquerque, N.M. | 20.1 |
| Orlando, Fla. | 34.9 | Chicago, Ill. | 18.6 |
| Buffalo, N.Y. | 32.8 | Riverside-San Bernardino, Calif. | 18.6 |
| Philadelphia, Pa. | 32.1 | Tucson, Ariz. | 18.4 |
| Norfolk, Va. | 31.9 | Denver, Colo. | 17.5 |
| Las Vegas, Nev. | 31.8 | Little Rock, Ark. | 17.5 |
| San Diego, Calif. | 30.5 | | |

*Includes only metropolitan areas with a population ≥500,000. Metropolitan areas are named for a central city or county, may include several cities and counties, and may cross state boundaries.

**FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending September 20, 1997, with historical data — United States**




*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

**TABLE I. Summary — provisional cases of selected notifiable diseases, United States, cumulative, week ending September 20, 1997 (38th Week)**

| | Cum. 1997 | | Cum. 1997 |
|---|---|---|---|
| Anthrax | - | Plague | 2 |
| Brucellosis | 51 | Poliomyelitis, paralytic | - |
| Cholera | 6 | Psittacosis | 34 |
| Congenital rubella syndrome | 4 | Rabies, human | 2 |
| Cryptosporidiosis* | 1,151 | Rocky Mountain spotted fever (RMSF) | 293 |
| Diphtheria | 5 | Streptococcal disease, invasive Group A | 1,077 |
| Encephalitis: California* | 65 | Streptococcal toxic-shock syndrome* | 26 |
| eastern equine* | 4 | Syphilis, congenital† | 354 |
| St. Louis* | 2 | Tetanus | 30 |
| western equine* | 1 | Toxic-shock syndrome | 89 |
| Hansen Disease | 76 | Trichinosis | 7 |
| Hantavirus pulmonary syndrome*† | 15 | Typhoid fever | 229 |
| Hemolytic uremic syndrome, post-diarrheal* | 42 | Yellow fever | - |
| HIV infection, pediatric*§ | 173 | | |

-:no reported cases
*Not notifiable in all states.
†Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update August 26, 1997.
¶Updated from reports to the Division of STD Prevention, NCHSTP.

## TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending September 20, 1997, and September 21, 1996 (38th Week)

| Reporting Area | AIDS | | Chlamydia | | *Escherichia coli* O157:H7 | | Gonorrhea | | Hepatitis C/NA,NB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | NETSS† | PHLIS§ | | | | | | | | |
| | Cum. 1997* | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1997 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 |
| UNITED STATES | 39,488 | 49,162 | 315,167 | 309,921 | 1,636 | 1,041 | 198,331 | 228,176 | 2,279 | 2,534 |
| NEW ENGLAND | 1,740 | 1,980 | 12,605 | 12,465 | 144 | 78 | 4,218 | 4,686 | 47 | 71 |
| Maine | 42 | 32 | 701 | 674 | 15 | - | 41 | 45 | - | - |
| N.H. | 26 | 66 | 554 | 535 | 8 | 12 | 72 | 121 | 8 | 7 |
| Vt. | 30 | 14 | 293 | 279 | 7 | 2 | 39 | 42 | 2 | 18 |
| Mass. | 604 | 995 | 5,220 | 4,943 | 76 | 58 | 1,567 | 1,582 | 30 | 40 |
| R.I. | 113 | 128 | 1,443 | 1,423 | 7 | - | 330 | 381 | 7 | 6 |
| Conn. | 925 | 745 | 4,394 | 4,611 | 31 | 6 | 2,169 | 2,515 | - | - |
| MID. ATLANTIC | 12,364 | 13,742 | 44,044 | 45,099 | 97 | 34 | 26,691 | 29,978 | 249 | 204 |
| Upstate N.Y. | 1,935 | 1,805 | N | N | 67 | - | 4,280 | 5,349 | 186 | 161 |
| N.Y. City | 6,469 | 7,840 | 22,538 | 22,890 | 8 | 6 | 10,145 | 10,688 | - | 3 |
| N.J. | 2,526 | 2,508 | 6,568 | 9,075 | 22 | 15 | 5,096 | 6,428 | - | - |
| Pa. | 1,434 | 1,589 | 14,938 | 13,134 | N | 12 | 7,170 | 7,513 | 63 | 40 |
| E.N. CENTRAL | 2,905 | 3,977 | 42,237 | 62,289 | 311 | 193 | 27,027 | 42,526 | 400 | 356 |
| Ohio | 626 | 835 | 8,256 | 15,095 | 75 | 38 | 5,728 | 10,949 | 14 | 26 |
| Ind. | 411 | 463 | 6,661 | 6,755 | 54 | 31 | 4,408 | 4,491 | 10 | 8 |
| Ill. | 1,186 | 1,799 | 7,714 | 17,801 | 56 | - | 3,763 | 12,616 | 65 | 71 |
| Mich. | 499 | 682 | 13,150 | 14,848 | 126 | 87 | 10,293 | 10,903 | 311 | 251 |
| Wis. | 183 | 198 | 6,456 | 7,790 | N | 37 | 2,835 | 3,567 | - | - |
| W.N. CENTRAL | 729 | 1,155 | 17,269 | 22,633 | 361 | 294 | 8,084 | 10,958 | 115 | 71 |
| Minn. | 138 | 188 | U | 3,560 | 155 | 151 | U | 1,610 | 3 | 1 |
| Iowa | 79 | 70 | 3,091 | 2,878 | 92 | 56 | 806 | 741 | 24 | 33 |
| Mo. | 318 | 619 | 8,448 | 9,194 | 37 | 47 | 5,328 | 6,203 | 74 | 18 |
| N. Dak. | 11 | 11 | 546 | 651 | 10 | 8 | 37 | 24 | 2 | - |
| S. Dak. | 7 | 10 | 865 | 1,068 | 24 | 24 | 94 | 134 | - | - |
| Nebr. | 72 | 74 | 1,658 | 2,036 | 27 | - | 657 | 770 | 2 | 6 |
| Kans. | 104 | 183 | 2,661 | 3,246 | 16 | 8 | 1,162 | 1,476 | 10 | 13 |
| S. ATLANTIC | 9,404 | 11,957 | 66,080 | 35,725 | 154 | 113 | 64,726 | 67,476 | 209 | 141 |
| Del. | 175 | 230 | 1,276 | 1,148 | 4 | 4 | 876 | 1,066 | - | 1 |
| Md. | 1,167 | 1,564 | 5,228 | U | 16 | 6 | 9,516 | 8,042 | 11 | 2 |
| D.C. | 657 | 871 | N | N | 2 | - | 3,187 | 3,209 | - | - |
| Va. | 769 | 800 | 8,426 | 8,067 | N | 38 | 5,922 | 6,789 | 22 | 12 |
| W. Va. | 79 | 87 | 2,138 | 1,559 | N | 1 | 682 | 558 | 13 | 9 |
| N.C. | 598 | 606 | 13,425 | U | 51 | 30 | 13,148 | 13,396 | 40 | 36 |
| S.C. | 545 | 625 | 9,152 | U | 8 | 7 | 8,464 | 8,275 | 32 | 21 |
| Ga. | 1,156 | 1,642 | 9,270 | 8,109 | 34 | - | 10,566 | 13,317 | U | - |
| Fla. | 4,258 | 5,532 | 17,165 | 16,842 | 38 | 27 | 12,365 | 12,824 | 91 | 60 |
| E.S. CENTRAL | 1,370 | 1,662 | 23,970 | 22,234 | 74 | 32 | 23,924 | 23,669 | 254 | 428 |
| Ky. | 234 | 307 | 4,680 | 4,868 | 23 | - | 2,974 | 3,036 | 11 | 27 |
| Tenn. | 576 | 605 | 9,232 | 9,685 | 37 | 32 | 7,904 | 8,558 | 180 | 319 |
| Ala. | 333 | 469 | 6,102 | 6,127 | 11 | - | 8,549 | 9,770 | 7 | 3 |
| Miss. | 227 | 281 | 3,956 | 1,554 | 3 | - | 4,497 | 2,305 | 56 | 79 |
| W.S. CENTRAL | 4,187 | 5,024 | 40,869 | 38,750 | 56 | 11 | 26,374 | 27,138 | 332 | 283 |
| Ark. | 160 | 205 | 965 | 1,317 | 9 | 1 | 2,068 | 3,013 | 2 | 8 |
| La. | 716 | 1,077 | 6,833 | 5,352 | 6 | 3 | 6,506 | 5,623 | 161 | 158 |
| Okla. | 215 | 191 | 5,490 | 5,551 | 7 | 4 | 3,616 | 3,553 | 7 | 1 |
| Tex. | 3,096 | 3,551 | 27,581 | 26,530 | 34 | 3 | 14,184 | 14,949 | 162 | 116 |
| MOUNTAIN | 1,114 | 1,416 | 17,138 | 18,649 | 195 | 102 | 5,764 | 5,656 | 327 | 436 |
| Mont. | 33 | 33 | 745 | 909 | 21 | - | 34 | 24 | 19 | 13 |
| Idaho | 37 | 31 | 1,043 | 1,130 | 24 | 13 | 83 | 81 | 43 | 92 |
| Wyo. | 13 | 5 | 427 | 449 | 15 | - | 42 | 32 | 150 | 136 |
| Colo. | 278 | 404 | 1,896 | 1,889 | 71 | 51 | 1,383 | 1,138 | 27 | 43 |
| N. Mex. | 112 | 116 | 2,359 | 2,874 | 7 | 5 | 945 | 606 | 48 | 63 |
| Ariz. | 273 | 373 | 7,723 | 8,082 | N | 23 | 2,574 | 2,789 | 24 | 52 |
| Utah | 88 | 142 | 1,184 | 1,148 | 47 | - | 186 | 227 | 3 | 19 |
| Nev. | 280 | 312 | 1,761 | 2,168 | 10 | 10 | 517 | 759 | 13 | 18 |
| PACIFIC | 5,675 | 8,248 | 50,955 | 52,077 | 244 | 184 | 11,523 | 16,089 | 346 | 544 |
| Wash. | 457 | 538 | 6,555 | 6,996 | 65 | 54 | 1,402 | 1,523 | 21 | 43 |
| Oreg. | 222 | 338 | 3,526 | 4,048 | 61 | 67 | 539 | 632 | 3 | 6 |
| Calif. | 4,918 | 7,208 | 38,626 | 38,907 | 107 | 56 | 8,958 | 13,291 | 207 | 342 |
| Alaska | 36 | 23 | 1,087 | 874 | 11 | 1 | 280 | 315 | - | 3 |
| Hawaii | 42 | 141 | 1,161 | 1,252 | N | 6 | 344 | 328 | 115 | 150 |
| Guam | 2 | 4 | 31 | 274 | N | - | 3 | 46 | - | 6 |
| P.R. | 1,382 | 1,511 | U | U | 32 | U | 441 | 493 | 96 | 127 |
| V.I. | 75 | 17 | N | N | N | U | - | - | - | - |
| Amer. Samoa | - | - | - | - | N | U | - | - | - | - |
| C.N.M.I. | 1 | - | N | N | N | U | 17 | 11 | 2 | - |

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update August 26, 1997.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

## TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending September 20, 1997, and September 21, 1996 (38th Week)

| Reporting Area | Legionellosis | | Lyme Disease | | Malaria | | Syphilis (Primary & Secondary) | | Tuberculosis | | Rabies, Animal |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 |
| UNITED STATES | 636 | 666 | 6,846 | 10,935 | 1,240 | 1,163 | 5,709 | 8,556 | 12,471 | 13,787 | 5,663 |
| NEW ENGLAND | 53 | 39 | 2,235 | 3,231 | 68 | 43 | 109 | 125 | 313 | 307 | 871 |
| Maine | 2 | 2 | 8 | 32 | 1 | 7 | - | - | 11 | 17 | 156 |
| N.H. | 6 | 3 | 24 | 40 | 7 | 2 | - | 1 | 10 | 9 | 28 |
| Vt. | 10 | 4 | 6 | 20 | 2 | 3 | - | - | 4 | 1 | 99 |
| Mass. | 16 | 21 | 235 | 171 | 24 | 15 | 53 | 60 | 179 | 149 | 188 |
| R.I. | 5 | 9 | 314 | 405 | 5 | 6 | 2 | 1 | 29 | 27 | 26 |
| Conn. | 14 | N | 1,648 | 2,563 | 29 | 10 | 54 | 63 | 80 | 104 | 374 |
| MID. ATLANTIC | 125 | 167 | 3,663 | 6,448 | 306 | 359 | 281 | 374 | 2,290 | 2,544 | 1,157 |
| Upstate N.Y. | 38 | 54 | 1,532 | 2,988 | 49 | 64 | 24 | 52 | 311 | 297 | 882 |
| N.Y. City | 6 | 11 | 43 | 313 | 170 | 219 | 64 | 109 | 1,171 | 1,333 | U |
| N.J. | 15 | 12 | 911 | 1,464 | 68 | 54 | 110 | 128 | 466 | 530 | 127 |
| Pa. | 66 | 90 | 1,177 | 1,683 | 19 | 22 | 83 | 85 | 342 | 384 | 148 |
| E.N. CENTRAL | 188 | 209 | 68 | 356 | 102 | 143 | 480 | 1,268 | 1,175 | 1,481 | 133 |
| Ohio | 84 | 71 | 46 | 19 | 16 | 13 | 145 | 476 | 222 | 211 | 89 |
| Ind. | 35 | 41 | 18 | 22 | 12 | 14 | 112 | 159 | 102 | 132 | 10 |
| Ill. | 7 | 30 | 4 | 8 | 31 | 71 | 48 | 360 | 561 | 791 | 12 |
| Mich. | 52 | 34 | - | 6 | 33 | 31 | 102 | 133 | 200 | 274 | 21 |
| Wis. | 10 | 33 | U | 301 | 10 | 14 | 73 | 140 | 90 | 73 | 1 |
| W.N. CENTRAL | 47 | 37 | 84 | 125 | 44 | 35 | 115 | 263 | 392 | 343 | 369 |
| Minn. | 1 | 3 | 56 | 38 | 19 | 15 | U | 31 | 104 | 80 | 41 |
| Iowa | 11 | 8 | 6 | 16 | 9 | 2 | 6 | 17 | 45 | 44 | 125 |
| Mo. | 15 | 10 | 16 | 39 | 7 | 9 | 82 | 185 | 164 | 144 | 16 |
| N. Dak. | 2 | - | - | - | 3 | 1 | - | - | 9 | 6 | 57 |
| S. Dak. | 2 | 2 | 1 | - | 1 | - | - | - | 9 | 15 | 60 |
| Nebr. | 12 | 11 | 2 | 3 | 1 | 2 | 5 | 10 | 14 | 14 | 1 |
| Kans. | 4 | 3 | 3 | 29 | 4 | 6 | 22 | 20 | 47 | 40 | 69 |
| S. ATLANTIC | 93 | 85 | 507 | 544 | 267 | 201 | 2,406 | 2,795 | 2,461 | 2,570 | 2,289 |
| Del. | 9 | 10 | 31 | 160 | 5 | 3 | 17 | 33 | 18 | 31 | 47 |
| Md. | 17 | 19 | 357 | 254 | 74 | 61 | 692 | 506 | 237 | 209 | 412 |
| D.C. | 4 | 7 | 7 | 3 | 14 | 7 | 82 | 101 | 75 | 102 | 5 |
| Va. | 19 | 13 | 45 | 40 | 59 | 33 | 175 | 304 | 220 | 201 | 477 |
| W. Va. | N | N | 5 | 11 | - | 3 | 3 | 9 | 45 | 45 | 69 |
| N.C. | 11 | 7 | 25 | 58 | 14 | 21 | 534 | 755 | 317 | 357 | 687 |
| S.C. | 5 | 4 | 2 | 4 | 15 | 9 | 280 | 298 | 229 | 268 | 144 |
| Ga. | - | 3 | 1 | 1 | 28 | 23 | 393 | 505 | 457 | 458 | 234 |
| Fla. | 27 | 22 | 34 | 13 | 58 | 41 | 230 | 284 | 863 | 899 | 214 |
| E.S. CENTRAL | 37 | 37 | 59 | 61 | 25 | 28 | 1,289 | 1,852 | 910 | 1,012 | 219 |
| Ky. | 6 | 5 | 7 | 22 | 5 | 7 | 104 | 102 | 124 | 173 | 27 |
| Tenn. | 25 | 17 | 34 | 17 | 7 | 12 | 567 | 617 | 321 | 341 | 122 |
| Ala. | 2 | 3 | 6 | 6 | 10 | 3 | 342 | 414 | 309 | 320 | 70 |
| Miss. | 4 | 12 | 12 | 16 | 3 | 6 | 276 | 719 | 156 | 178 | - |
| W.S. CENTRAL | 13 | 18 | 60 | 86 | 16 | 26 | 687 | 1,334 | 1,720 | 1,598 | 250 |
| Ark. | - | 1 | 16 | 20 | 4 | - | 71 | 191 | 140 | 139 | 27 |
| La. | 2 | 1 | 2 | 1 | 9 | 6 | 266 | 394 | 160 | 15 | 4 |
| Okla. | 3 | 6 | 12 | 14 | 3 | - | 89 | 142 | 132 | 123 | 84 |
| Tex. | 8 | 10 | 30 | 51 | - | 20 | 261 | 607 | 1,288 | 1,321 | 135 |
| MOUNTAIN | 43 | 34 | 15 | 7 | 59 | 48 | 165 | 107 | 353 | 447 | 148 |
| Mont. | 1 | 1 | - | - | 2 | 6 | - | - | 7 | 14 | 36 |
| Idaho | 2 | - | 3 | - | - | - | 1 | 4 | 8 | 7 | - |
| Wyo. | 1 | 3 | 3 | 3 | 2 | 7 | - | 2 | 2 | 6 | 30 |
| Colo. | 15 | 7 | 4 | - | 26 | 19 | 11 | 24 | 64 | 54 | 20 |
| N. Mex. | 2 | 1 | 1 | 1 | 8 | 2 | 46 | 4 | 21 | 63 | 9 |
| Ariz. | 9 | 15 | 1 | - | 9 | 6 | 93 | 58 | 180 | 172 | 41 |
| Utah | 8 | 2 | 1 | 1 | 3 | 4 | 5 | 2 | 25 | 39 | 5 |
| Nev. | 5 | 5 | 2 | 2 | 9 | 4 | 9 | 13 | 46 | 92 | 7 |
| PACIFIC | 37 | 40 | 155 | 77 | 353 | 280 | 177 | 438 | 2,857 | 3,485 | 227 |
| Wash. | 6 | 5 | 7 | 13 | 18 | 18 | 8 | 8 | 215 | 201 | - |
| Oreg. | - | - | 17 | 16 | 17 | 18 | 6 | 6 | 118 | 127 | 14 |
| Calif. | 30 | 31 | 131 | 47 | 313 | 234 | 161 | 422 | 2,338 | 2,958 | 190 |
| Alaska | - | 1 | - | - | 3 | 3 | 1 | - | 61 | 59 | 23 |
| Hawaii | 1 | 3 | - | 1 | 2 | 7 | 1 | 2 | 125 | 140 | - |
| Guam | - | 1 | - | - | - | - | - | 3 | 5 | 55 | - |
| P.R. | - | - | - | - | 5 | 1 | 183 | 163 | 164 | 130 | 54 |
| V.I. | - | - | - | - | - | - | - | - | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | - | - | - | - | - |
| C.N.M.I. | - | - | - | - | - | - | 9 | 1 | 2 | - | - |

N: Not notifiable U: Unavailable -: no reported cases

## TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending September 20, 1997, and September 21, 1996 (38th Week)

| Reporting Area | *H. influenzae*, invasive | | Hepatitis (Viral), by type | | | | Measles (Rubeola) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | | B | | Indigenous | | Imported† | | Total | |
| | Cum. 1997* | Cum. 1996 | Cum. 1997 | Cum. 1996 | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | 1997 | Cum. 1997 | Cum. 1997 | Cum. 1996 |
| UNITED STATES | 766 | 786 | 20,106 | 20,095 | 6,141 | 7,002 | 1 | 60 | - | 47 | 107 | 445 |
| NEW ENGLAND | 45 | 26 | 474 | 274 | 108 | 159 | - | 11 | - | 6 | 17 | 15 |
| Maine | 5 | - | 47 | 15 | 6 | 2 | - | - | - | 1 | 1 | - |
| N.H. | 5 | 10 | 22 | 11 | 10 | 11 | - | 1 | - | - | 1 | - |
| Vt. | 3 | 1 | 10 | 6 | 5 | 11 | - | - | - | - | - | 2 |
| Mass. | 28 | 13 | 186 | 140 | 43 | 58 | - | 10 | - | 4 | 14 | 12 |
| R.I. | 2 | 2 | 111 | 13 | 12 | 9 | - | - | - | - | - | - |
| Conn. | 2 | - | 98 | 89 | 32 | 68 | - | - | - | 1 | 1 | 1 |
| MID. ATLANTIC | 95 | 163 | 1,367 | 1,404 | 915 | 1,052 | - | 14 | - | 8 | 22 | 36 |
| Upstate N.Y. | 23 | 40 | 233 | 318 | 202 | 253 | - | 2 | - | 3 | 5 | 10 |
| N.Y. City | 25 | 43 | 506 | 430 | 332 | 374 | - | 5 | - | 2 | 7 | 11 |
| N.J. | 37 | 44 | 193 | 276 | 155 | 203 | - | 2 | - | - | 2 | 3 |
| Pa. | 10 | 36 | 435 | 380 | 226 | 222 | - | 5 | - | 3 | 8 | 12 |
| E.N. CENTRAL | 128 | 133 | 1,962 | 1,858 | 650 | 811 | - | 6 | - | 3 | 9 | 20 |
| Ohio | 74 | 77 | 245 | 589 | 60 | 98 | - | - | - | - | - | 5 |
| Ind. | 13 | 8 | 220 | 244 | 74 | 104 | - | - | - | - | - | - |
| Ill. | 28 | 35 | 466 | 544 | 164 | 259 | - | 6 | - | 1 | 7 | 3 |
| Mich. | 12 | 8 | 917 | 321 | 320 | 280 | - | - | - | 2 | 2 | 3 |
| Wis. | 1 | 5 | 114 | 160 | 32 | 70 | - | - | - | - | - | 9 |
| W.N. CENTRAL | 41 | 36 | 1,605 | 1,723 | 330 | 365 | 1 | 12 | - | 5 | 17 | 22 |
| Minn. | 27 | 23 | 132 | 95 | 28 | 41 | 1 | 3 | - | 5 | 8 | 18 |
| Iowa | 6 | 3 | 343 | 265 | 30 | 53 | - | - | - | - | - | - |
| Mo. | 4 | 7 | 811 | 869 | 232 | 212 | - | 1 | - | - | 1 | 3 |
| N. Dak. | - | - | 10 | 84 | 4 | 2 | - | - | - | - | - | - |
| S. Dak. | 2 | 1 | 18 | 41 | 1 | 5 | - | 8 | - | - | 8 | - |
| Nebr. | 1 | 1 | 77 | 111 | 12 | 27 | - | - | - | - | - | - |
| Kans. | 1 | 1 | 214 | 258 | 23 | 25 | - | - | - | - | - | 1 |
| S. ATLANTIC | 130 | 145 | 1,312 | 873 | 934 | 954 | - | 1 | - | 10 | 11 | 11 |
| Del. | - | 2 | 24 | 13 | 5 | 7 | - | - | - | - | - | 1 |
| Md. | 47 | 52 | 174 | 149 | 130 | 121 | - | - | - | 2 | 2 | 2 |
| D.C. | - | 5 | 17 | 28 | 25 | 28 | - | - | - | 1 | 1 | - |
| Va. | 12 | 7 | 167 | 124 | 91 | 104 | - | - | - | 1 | 1 | 3 |
| W. Va. | 3 | 7 | 10 | 13 | 14 | 20 | - | - | - | - | - | - |
| N.C. | 19 | 22 | 150 | 106 | 180 | 266 | - | - | - | 2 | 2 | 2 |
| S.C. | 4 | 4 | 83 | 43 | 81 | 64 | - | - | - | 1 | 1 | - |
| Ga. | 25 | 31 | 274 | 89 | 105 | 10 | - | - | - | 1 | 1 | 2 |
| Fla. | 20 | 15 | 413 | 308 | 303 | 334 | - | 1 | - | 2 | 3 | 1 |
| E.S. CENTRAL | 38 | 23 | 461 | 1,009 | 493 | 620 | - | - | - | - | - | 2 |
| Ky. | 5 | 5 | 62 | 39 | 27 | 56 | - | - | - | - | - | - |
| Tenn. | 24 | 9 | 289 | 659 | 331 | 354 | - | - | - | - | - | 2 |
| Ala. | 9 | 8 | 69 | 145 | 55 | 50 | - | - | - | - | - | - |
| Miss. | - | 1 | 41 | 166 | 80 | 160 | - | - | - | - | - | - |
| W.S. CENTRAL | 38 | 32 | 4,255 | 3,944 | 735 | 858 | - | 3 | - | 4 | 7 | 25 |
| Ark. | 1 | - | 198 | 337 | 43 | 62 | - | - | - | - | - | - |
| La. | 10 | 3 | 169 | 125 | 113 | 92 | - | - | - | - | - | - |
| Okla. | 24 | 25 | 1,179 | 1,698 | 37 | 24 | - | - | - | - | - | - |
| Tex. | 3 | 4 | 2,709 | 1,784 | 542 | 680 | - | 3 | - | 4 | 7 | 25 |
| MOUNTAIN | 78 | 39 | 3,313 | 3,225 | 681 | 842 | - | 6 | - | 2 | 8 | 156 |
| Mont. | - | - | 59 | 91 | 7 | 10 | - | - | - | - | - | - |
| Idaho | 1 | 1 | 101 | 165 | 27 | 74 | - | - | - | - | - | 1 |
| Wyo. | 3 | - | 30 | 26 | 30 | 35 | - | - | - | - | - | 1 |
| Colo. | 12 | 11 | 319 | 334 | 124 | 101 | - | - | - | - | - | 7 |
| N. Mex. | 8 | 9 | 270 | 304 | 203 | 302 | - | - | - | - | - | 16 |
| Ariz. | 29 | 12 | 1,731 | 1,253 | 154 | 186 | - | 5 | - | - | 5 | 8 |
| Utah | 3 | 6 | 474 | 748 | 76 | 73 | - | - | - | 1 | 1 | 118 |
| Nev. | 22 | - | 329 | 304 | 60 | 61 | - | 1 | - | 1 | 2 | 5 |
| PACIFIC | 173 | 189 | 5,357 | 5,785 | 1,295 | 1,341 | - | 7 | - | 9 | 16 | 158 |
| Wash. | 4 | 2 | 416 | 357 | 54 | 72 | - | 1 | - | 1 | 2 | 38 |
| Oreg. | 29 | 25 | 276 | 678 | 76 | 81 | - | - | - | - | - | 12 |
| Calif. | 128 | 155 | 4,537 | 4,654 | 1,140 | 1,168 | - | 4 | - | 7 | 11 | 38 |
| Alaska | 5 | 5 | 25 | 36 | 17 | 9 | - | - | - | - | - | 63 |
| Hawaii | 7 | 2 | 103 | 60 | 8 | 11 | - | 2 | - | 1 | 3 | 7 |
| Guam | - | - | - | 7 | 1 | 1 | U | - | U | - | - | - |
| P.R. | - | 1 | 223 | 161 | 1,077 | 697 | - | - | - | - | - | 2 |
| V.I. | - | - | - | 30 | - | 28 | U | - | U | - | - | - |
| Amer. Samoa | - | - | - | - | - | - | U | 1 | U | - | 1 | - |
| C.N.M.I. | 6 | 10 | 1 | 1 | 34 | 5 | | | | | | |

N: Not notifiable U: Unavailable -: no reported cases

*Of 174 cases among children aged <5 years, serotype was reported for 93 and of those, 38 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

## TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending September 20, 1997, and September 21, 1996 (38th Week)

| Reporting Area | Meningococcal Disease | | Mumps | | | Pertussis | | | Rubella | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | Cum. 1996 | 1997 | Cum. 1997 | Cum. 1996 |
| NITED STATES | 2,417 | 2,364 | 8 | 416 | 521 | 90 | 3,640 | 4,034 | 1 | 137 | 214 |
| EW ENGLAND | 154 | 98 | - | 8 | 1 | 14 | 664 | 853 | - | 1 | 25 |
| laine | 17 | 10 | - | - | - | - | 6 | 32 | - | - | - |
| .H. | 13 | 3 | - | - | - | 1 | 81 | 72 | - | - | - |
| t. | 4 | 3 | - | - | - | 1 | 191 | 74 | - | - | 2 |
| lass. | 74 | 40 | - | 2 | 1 | 10 | 355 | 624 | - | 1 | 20 |
| .I. | 14 | 10 | - | 5 | - | - | 12 | 25 | - | - | - |
| onn. | 32 | 32 | - | 1 | - | 2 | 19 | 26 | - | - | 3 |
| ID. ATLANTIC | 216 | 250 | 1 | 43 | 63 | 7 | 273 | 303 | - | 29 | 10 |
| pstate N.Y. | 54 | 66 | - | 7 | 19 | - | 94 | 160 | - | 2 | 4 |
| .Y. City | 39 | 37 | - | 3 | 16 | - | 56 | 28 | - | 27 | 4 |
| .J. | 46 | 53 | - | 5 | 2 | - | 9 | 21 | - | - | 2 |
| a. | 77 | 94 | 1 | 28 | 26 | 7 | 114 | 94 | - | - | - |
| .N. CENTRAL | 340 | 343 | - | 44 | 105 | 1 | 302 | 507 | - | 5 | 3 |
| hio | 134 | 124 | - | 19 | 39 | - | 109 | 191 | - | - | - |
| nd. | 41 | 50 | - | 7 | 6 | - | 39 | 36 | - | - | - |
| l. | 100 | 94 | - | 9 | 19 | 1 | 55 | 119 | - | 2 | 1 |
| lich. | 39 | 35 | - | 9 | 39 | - | 40 | 32 | - | - | 2 |
| is. | 26 | 40 | - | - | 2 | - | 59 | 129 | - | 3 | - |
| .N. CENTRAL | 178 | 191 | - | 14 | 15 | 19 | 304 | 247 | - | - | - |
| linn. | 29 | 25 | - | 5 | 5 | 12 | 196 | 186 | - | - | - |
| owa | 39 | 40 | - | 7 | 1 | 3 | 33 | 13 | - | - | - |
| lo. | 78 | 72 | - | - | 6 | 4 | 50 | 27 | - | - | - |
| . Dak. | 2 | 3 | - | - | 2 | - | 2 | 1 | - | - | - |
| . Dak. | 5 | 10 | - | - | - | - | 4 | 4 | - | - | - |
| ebr. | 8 | 18 | - | 2 | - | - | 6 | 5 | - | - | - |
| ans. | 17 | 23 | - | - | 1 | - | 13 | 11 | - | - | - |
| . ATLANTIC | 432 | 371 | 5 | 61 | 87 | 27 | 363 | 422 | 1 | 69 | 91 |
| el. | 5 | 2 | - | - | - | - | 1 | 19 | - | - | - |
| Md. | 40 | 44 | - | 4 | 28 | 1 | 102 | 154 | - | 3 | - |
| .C. | - | 5 | - | - | - | - | 3 | - | - | 1 | 1 |
| a. | 40 | 44 | 1 | 10 | 12 | 8 | 42 | 56 | - | 1 | 2 |
| V. Va. | 14 | 13 | 1 | 1 | - | - | 6 | 2 | - | - | - |
| .C. | 78 | 62 | - | 9 | 19 | 10 | 99 | 76 | 1 | 53 | 77 |
| .C. | 45 | 45 | - | 10 | 5 | 2 | 22 | 26 | - | 9 | 1 |
| a. | 83 | 110 | - | 8 | 3 | - | 11 | 19 | - | - | - |
| la. | 127 | 46 | 3 | 19 | 20 | 6 | 77 | 70 | - | 2 | 10 |
| .S. CENTRAL | 189 | 168 | 1 | 21 | 19 | 2 | 82 | 178 | - | - | 2 |
| y. | 38 | 21 | - | 3 | - | - | 21 | 135 | - | - | - |
| enn. | 72 | 48 | 1 | 5 | 1 | 1 | 32 | 18 | - | - | - |
| la. | 62 | 59 | - | 7 | 3 | 1 | 21 | 18 | - | - | 2 |
| liss. | 17 | 40 | - | 6 | 15 | - | 8 | 7 | - | - | N |
| V.S. CENTRAL | 236 | 266 | 1 | 45 | 38 | 9 | 164 | 106 | - | 4 | 8 |
| rk. | 29 | 29 | - | 1 | 1 | 2 | 28 | 4 | - | - | - |
| a. | 46 | 49 | - | 12 | 12 | 2 | 17 | 7 | - | - | 1 |
| kla. | 30 | 29 | - | - | - | 3 | 25 | 8 | - | - | - |
| ex. | 131 | 159 | 1 | 32 | 25 | 2 | 94 | 87 | - | 4 | 7 |
| OUNTAIN | 147 | 140 | - | 51 | 21 | 5 | 897 | 364 | - | 6 | 6 |
| ont. | 8 | 6 | - | - | - | - | 16 | 26 | - | - | - |
| daho | 8 | 20 | - | 2 | - | - | 542 | 100 | - | 1 | 2 |
| Wyo. | 2 | 3 | - | 1 | - | 1 | 7 | 4 | - | - | - |
| olo. | 38 | 29 | - | 3 | 3 | 2 | 199 | 122 | - | - | 2 |
| N. Mex. | 23 | 22 | N | N | N | 2 | 74 | 46 | - | - | - |
| riz. | 41 | 32 | - | 31 | 1 | - | 31 | 24 | - | 5 | 1 |
| Utah | 12 | 12 | - | 7 | 3 | - | 14 | 13 | - | - | - |
| lev. | 15 | 16 | - | 7 | 14 | - | 14 | 29 | - | - | 1 |
| ACIFIC | 525 | 537 | - | 129 | 172 | 6 | 591 | 1,054 | - | 23 | 69 |
| Wash. | 63 | 75 | - | 14 | 18 | 6 | 267 | 456 | - | 5 | 15 |
| Oreg. | 102 | 95 | N | N | N | - | 17 | 51 | - | - | 1 |
| Calif. | 353 | 357 | - | 95 | 127 | - | 282 | 519 | - | 10 | 50 |
| Alaska | 2 | 6 | - | 3 | 2 | - | 14 | 2 | - | - | - |
| Hawaii | 5 | 4 | - | 17 | 25 | - | 11 | 26 | - | 8 | 3 |
| Guam | - | 4 | U | 1 | 6 | U | - | - | U | - | - |
| P.R. | 9 | 11 | - | 7 | 1 | - | - | 2 | - | - | - |
| V.I. | - | - | U | - | 1 | U | - | - | U | - | - |
| Amer. Samoa | - | - | U | - | - | U | - | - | U | - | - |
| C.N.M.I. | - | - | U | 4 | - | U | - | - | U | - | - |

N: Not notifiable U: Unavailable -: no reported cases

# TABLE IV. Deaths in 122 U.S. cities,* week ending September 20, 1997 (38th Week)

| Reporting Area | All Causes, By Age (Years) | | | | | | P&I† Total |
|---|---|---|---|---|---|---|---|
| | All Ages | >65 | 45-64 | 25-44 | 1-24 | <1 | |
| NEW ENGLAND | 550 | 393 | 92 | 41 | 17 | 7 | 44 |
| Boston, Mass. | 150 | 101 | 26 | 14 | 8 | 1 | 12 |
| Bridgeport, Conn. | 37 | 32 | 3 | 1 | 1 | - | 3 |
| Cambridge, Mass. | 24 | 21 | 3 | - | - | - | 2 |
| Fall River, Mass. | 34 | 30 | 3 | 1 | - | - | 3 |
| Hartford, Conn. | 59 | 34 | 14 | 8 | 1 | 2 | 2 |
| Lowell, Mass. | 17 | 15 | 1 | - | 1 | - | 3 |
| Lynn, Mass. | 16 | 13 | - | 2 | 1 | - | 2 |
| New Bedford, Mass. | 21 | 17 | 2 | 2 | - | - | 2 |
| New Haven, Conn. | 40 | 24 | 10 | 2 | 2 | 2 | 3 |
| Providence, R.I. | 47 | 36 | 5 | 5 | 1 | - | - |
| Somerville, Mass. | 5 | 4 | - | 1 | - | - | - |
| Springfield, Mass. | 41 | 25 | 11 | 3 | 1 | 1 | 5 |
| Waterbury, Conn. | 18 | 13 | 4 | - | 1 | - | 2 |
| Worcester, Mass. | 41 | 28 | 10 | 2 | - | 1 | 5 |
| MID. ATLANTIC | 2,192 | 1,508 | 428 | 175 | 46 | 35 | 109 |
| Albany, N.Y. | 44 | 32 | 7 | 3 | 1 | 1 | 5 |
| Allentown, Pa. | 14 | 12 | 2 | - | - | - | 1 |
| Buffalo, N.Y. | 59 | 41 | 14 | 1 | 1 | 2 | 2 |
| Camden, N.J. | 34 | 17 | 8 | 6 | 2 | 1 | 3 |
| Elizabeth, N.J. | 18 | 13 | 3 | 2 | - | - | - |
| Erie, Pa. | 43 | 36 | 3 | 3 | 1 | - | 2 |
| Jersey City, N.J. | 27 | 21 | 3 | 3 | - | - | 1 |
| New York City, N.Y. | 1,131 | 765 | 234 | 87 | 20 | 25 | 46 |
| Newark, N.J. | 58 | 22 | 22 | 9 | 5 | - | 6 |
| Paterson, N.J. | 37 | 25 | 8 | 4 | - | - | - |
| Philadelphia, Pa. | 300 | 199 | 61 | 30 | 7 | 3 | 12 |
| Pittsburgh, Pa.§ | 60 | 47 | 9 | 4 | - | - | 5 |
| Reading, Pa. | 33 | 29 | 2 | 2 | - | - | 1 |
| Rochester, N.Y. | 121 | 88 | 22 | 5 | 5 | 1 | 10 |
| Schenectady, N.Y. | 14 | 13 | 1 | - | - | - | 1 |
| Scranton, Pa. | 28 | 22 | 4 | 2 | - | - | 2 |
| Syracuse, N.Y. | 78 | 57 | 13 | 5 | 2 | 1 | 6 |
| Trenton, N.J. | 52 | 34 | 9 | 6 | 2 | 1 | 5 |
| Utica, N.Y. | 14 | 11 | 1 | 2 | - | - | - |
| Yonkers, N.Y. | 27 | 24 | 2 | 1 | - | - | 1 |
| E.N. CENTRAL | 1,971 | 1,325 | 390 | 163 | 43 | 49 | 103 |
| Akron, Ohio | 45 | 33 | 8 | 1 | 1 | 2 | 1 |
| Canton, Ohio | 42 | 35 | 5 | - | - | 2 | 6 |
| Chicago, Ill. | 397 | 237 | 94 | 46 | 9 | 10 | 22 |
| Cincinnati, Ohio | 89 | 62 | 14 | 4 | 4 | 5 | 7 |
| Cleveland, Ohio | 134 | 78 | 32 | 16 | 3 | 5 | 3 |
| Columbus, Ohio | 230 | 152 | 49 | 21 | 5 | 3 | 14 |
| Dayton, Ohio | 107 | 74 | 21 | 9 | 3 | - | 6 |
| Detroit, Mich. | 209 | 113 | 57 | 26 | 6 | 7 | - |
| Evansville, Ind. | 34 | 25 | 7 | 1 | 1 | - | 2 |
| Fort Wayne, Ind. | 56 | 44 | 7 | 2 | 3 | - | 8 |
| Gary, Ind. | U | U | U | U | U | U | U |
| Grand Rapids, Mich. | 55 | 42 | 9 | 1 | 3 | - | 2 |
| Indianapolis, Ind. | 162 | 120 | 24 | 9 | 2 | 7 | 8 |
| Lansing, Mich. | 30 | 23 | 3 | 3 | - | 1 | 3 |
| Milwaukee, Wis. | 116 | 85 | 17 | 12 | - | 2 | 7 |
| Peoria, Ill. | 27 | 17 | 6 | 2 | 1 | 1 | 2 |
| Rockford, Ill. | 54 | 43 | 4 | 3 | 2 | 2 | 2 |
| South Bend, Ind. | 33 | 24 | 7 | 2 | - | - | - |
| Toledo, Ohio | 104 | 79 | 20 | 4 | - | 1 | 8 |
| Youngstown, Ohio | 47 | 39 | 6 | 1 | - | 1 | 2 |
| W.N. CENTRAL | 745 | 536 | 120 | 48 | 22 | 9 | 43 |
| Des Moines, Iowa | U | U | U | U | U | U | U |
| Duluth, Minn. | 34 | 25 | 6 | 2 | 1 | - | 1 |
| Kansas City, Kans. | 33 | 21 | 5 | 3 | 3 | 1 | - |
| Kansas City, Mo. | 83 | 54 | 14 | 4 | 1 | - | 9 |
| Lincoln, Nebr. | 26 | 21 | 3 | 2 | - | - | 2 |
| Minneapolis, Minn. | 240 | 183 | 35 | 11 | 9 | 2 | 13 |
| Omaha, Nebr. | 85 | 57 | 14 | 10 | 2 | 2 | 6 |
| St. Louis, Mo. | 112 | 80 | 18 | 8 | 4 | 2 | 7 |
| St. Paul, Minn. | 53 | 38 | 10 | 4 | - | 1 | 2 |
| Wichita, Kans. | 79 | 57 | 15 | 4 | 2 | 1 | 3 |
| S. ATLANTIC | 1,268 | 805 | 255 | 127 | 43 | 36 | 54 |
| Atlanta, Ga. | 155 | 94 | 33 | 20 | 4 | 4 | 2 |
| Baltimore, Md. | 189 | 113 | 39 | 24 | 5 | 6 | 13 |
| Charlotte, N.C. | 88 | 58 | 15 | 9 | 3 | 3 | 3 |
| Jacksonville, Fla. | 137 | 91 | 27 | 13 | 4 | 2 | 3 |
| Miami, Fla. | 107 | 64 | 29 | 8 | 4 | 2 | 3 |
| Norfolk, Va. | 51 | 31 | 7 | 2 | 6 | 5 | - |
| Richmond, Va. | 95 | 50 | 20 | 20 | 3 | 2 | 6 |
| Savannah, Ga. | 54 | 32 | 16 | 3 | 1 | 2 | 3 |
| St. Petersburg, Fla. | 58 | 49 | 1 | 6 | - | 2 | 1 |
| Tampa, Fla. | 183 | 146 | 20 | 10 | 4 | 3 | 18 |
| Washington, D.C. | 130 | 66 | 38 | 12 | 9 | 5 | 2 |
| Wilmington, Del. | 21 | 11 | 10 | - | - | - | - |
| E.S. CENTRAL | 820 | 545 | 164 | 71 | 17 | 21 | 56 |
| Birmingham, Ala. | 174 | 129 | 24 | 16 | 1 | 2 | 20 |
| Chattanooga, Tenn. | 56 | 43 | 7 | 4 | 1 | 1 | 3 |
| Knoxville, Tenn. | 107 | 67 | 27 | 7 | - | 6 | 4 |
| Lexington, Ky. | 71 | 48 | 11 | 8 | 3 | 1 | 11 |
| Memphis, Tenn. | 227 | 136 | 58 | 20 | 6 | 7 | 16 |
| Mobile, Ala. | 18 | 11 | 3 | 3 | 1 | - | - |
| Montgomery, Ala. | 24 | 19 | 4 | 1 | - | - | 2 |
| Nashville, Tenn. | 143 | 92 | 30 | 12 | 5 | 4 | - |
| W.S. CENTRAL | 1,384 | 836 | 324 | 137 | 47 | 38 | 63 |
| Austin, Tex. | 71 | 40 | 16 | 9 | 5 | 1 | 1 |
| Baton Rouge, La. | 41 | 28 | 9 | 2 | - | 2 | 2 |
| Corpus Christi, Tex. | 50 | 34 | 11 | 5 | - | - | 4 |
| Dallas, Tex. | 177 | 98 | 37 | 25 | 10 | 7 | 3 |
| El Paso, Tex. | 63 | 43 | 14 | 4 | 1 | 1 | 5 |
| Ft. Worth, Tex. | 96 | 56 | 18 | 13 | 5 | 4 | 2 |
| Houston, Tex. | 374 | 209 | 115 | 33 | 8 | 9 | 25 |
| Little Rock, Ark. | 74 | 48 | 17 | 4 | 4 | 1 | 2 |
| New Orleans, La. | 105 | 66 | 15 | 14 | 3 | 7 | - |
| San Antonio, Tex. | 186 | 114 | 47 | 17 | 3 | 3 | 11 |
| Shreveport, La. | 63 | 40 | 12 | 4 | 5 | 2 | 6 |
| Tulsa, Okla. | 84 | 60 | 13 | 7 | 3 | 1 | 2 |
| MOUNTAIN | 872 | 556 | 166 | 97 | 30 | 18 | 51 |
| Albuquerque, N.M. | 63 | 42 | 10 | 7 | 2 | 2 | - |
| Boise, Idaho | 31 | 21 | 7 | 1 | - | 1 | 2 |
| Colo. Springs, Colo. | 48 | 34 | 8 | 3 | - | 3 | 3 |
| Denver, Colo. | 89 | 50 | 22 | 15 | 1 | 1 | 8 |
| Las Vegas, Nev. | 195 | 113 | 53 | 22 | 5 | 1 | 12 |
| Ogden, Utah | 23 | 18 | - | 4 | 1 | - | 3 |
| Phoenix, Ariz. | 154 | 98 | 23 | 20 | 10 | 3 | 7 |
| Pueblo, Colo. | 27 | 19 | 5 | 2 | 1 | - | 2 |
| Salt Lake City, Utah | 101 | 63 | 18 | 9 | 5 | 3 | 7 |
| Tucson, Ariz. | 141 | 98 | 20 | 14 | 5 | 4 | 7 |
| PACIFIC | 2,032 | 1,425 | 376 | 133 | 60 | 38 | 153 |
| Berkeley, Calif. | 14 | 9 | 5 | - | - | - | 1 |
| Fresno, Calif. | 41 | 30 | 7 | 2 | 2 | - | 4 |
| Glendale, Calif. | 33 | 25 | 6 | 1 | - | 1 | 1 |
| Honolulu, Hawaii | 78 | 56 | 13 | 4 | 3 | 2 | 3 |
| Long Beach, Calif. | 86 | 50 | 26 | 6 | 3 | 1 | 12 |
| Los Angeles, Calif. | 649 | 466 | 109 | 39 | 23 | 12 | 30 |
| Pasadena, Calif. | 40 | 28 | 7 | 1 | 1 | 3 | 5 |
| Portland, Oreg. | 198 | 131 | 31 | 23 | 12 | 1 | 4 |
| Sacramento, Calif. | 198 | 150 | 31 | 11 | 3 | 3 | 34 |
| San Diego, Calif. | 122 | 75 | 36 | 7 | 3 | 1 | 16 |
| San Francisco, Calif. | 139 | 89 | 30 | 14 | 3 | 3 | 16 |
| San Jose, Calif. | 165 | 123 | 30 | 7 | 3 | 2 | 14 |
| Santa Cruz, Calif. | 39 | 28 | 7 | 4 | - | - | 5 |
| Seattle, Wash. | 126 | 84 | 22 | 10 | 2 | 8 | 1 |
| Spokane, Wash. | 37 | 27 | 8 | 1 | - | 1 | 5 |
| Tacoma, Wash. | 67 | 54 | 8 | 3 | 2 | - | 2 |
| TOTAL | 11,834¶ | 7,929 | 2,315 | 992 | 325 | 251 | 676 |

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

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